No. 9300228

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Helena Chemical Company also d/b/a
Ag Performer Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (7 U.S.C. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'HSC 741'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 30th day of November in the year of our Lord one thousand nine hundred and ninety-five.

Attest:

Marsha A. Stanbery
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Dan Glickman
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
Helena Chemical Company also d/b/a HyPerformer Seed Company

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.
HB90-741

3. VARIETY NAME
HSC 741

4. ADDRESS *(street and no. or R.F.D. no., city, state, and ZIP)*
~~6075 POPLAR AVE SUITE 500 MEMPHIS, TN 38119~~ One HY Crop Row Memphis, TN 38120 9/L 20 Sept. 1995

5. PHONE *(Include area code)*
(901) 761-0050

FOR OFFICIAL USE ONLY

PVPO NUMBER
9300228

FILING
Date: June 1, 1993
Time: 11:00 [XX] A.M. [ ] P.M.

FEES RECEIVED
Filing and Examination Fee: $2150 + 175.00
Date: 4/2/93, 6/1/93
Certificate Fee: $275.00
Date: Sept. 11, 1995

6. GENUS AND SPECIES NAME
Glycine max

7. FAMILY NAME *(Botanical)*
Leguminosae

8. CROP KIND NAME *(Common Name)*
Soybean

9. DATE OF DETERMINATION
1983

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Delaware

12. DATE OF INCORPORATION
1977

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Al Hoggard
Helena Chemical Company
6075 Poplar, Suite 500
Memphis, TN 38119

PHONE *(Include area code)*: 901-761-0050

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*

a. [X] Exhibit A, Origin and Breeding History of the Variety.
b. [X] Exhibit B, Novelty Statement.
c. [X] Exhibit C, Objective Description of Variety.
d. [X] Exhibit D, Additional Description of Variety.
e. [X] Exhibit E, Statement of the Basis of Applicant's Ownership.
f. [X] Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office _____.
g. [X] Filing and Examination Fee ($2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See section 83(a) of the Plant Variety Protection Act.)*
[ ] YES *(If "YES," answer items 16 and 17 below)* [X] NO *(If "NO," skip to item 18 below)*

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
[ ] YES [ ] NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
[ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
[ ] YES *(If "YES," through* [ ] Plant Variety Protection Act [ ] Patent Act. Give date: _____.)
[XX] NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
[XX] YES (If "YES," give names of countries and dates) Limited sales in April and May of 1992 in the United States.
[ ] NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *[Owner(s)]*	CAPACITY OR TITLE	DATE
Richard S. Gallagher	Director of Seed	3-29-93
SIGNATURE OF APPLICANT *[Owner(s)]*	CAPACITY OR TITLE	DATE
Bobby Pace	Vice Pres. Tech. Services	3/30/93

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EXHIBIT A

HELENA CHEMICAL COMPANY, INC.
APPLICATION FOR
HSC 741

ORIGIN AND BREEDING HISTORY

1978	-	Original cross made between Bedford and an unknown parent
1979	-	F_1 plants grown in field
1980	-	F_2 populations in field
1981	-	F_3 population grown in field, selected plants
1982	-	F_4 plant rows planted in cyst nematode infested field in East Mississippi. Selected plants from most vigorous rows.
1983	-	F_5 rows planted - row 27806 was composited and found to be breeding true for major characteristics.
1984-89	-	Yield tested at several locations including cyst nematode and root knot nematode infested soil.
1990-92	-	Tested in state experiment station yield tests as HB90-741.
1993	-	Released as HSC 741.

HSC 741 may have up to 1/2000 plants with either/or white flowers, gray pubescence, and/or hila other than buff.

All of these characters are acceptable and predictable and have shown stability and uniformity through six generations of seed increase.

At present, the variety is essentially free of contaminants.

EXHIBIT B

HELENA CHEMICAL COMPANY, INC'S APPLICATION FOR HSC 741

NOVELTY STATEMENT

To our knowledge HSC 741 most nearly resembles Braxton and DP 3818. Differences include but are not necessarily restricted to the following:

1) HSC 741 has resistance to races 3 and 14 of soybean cyst nematode whereas Braxton is susceptible. HSC 741 is moderately susceptible to stem canker whereas Braxton is resistant.

2) HSC 741 has purple flowers whereas DP 3818 has white flowers.

FORM APPROVED: OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Helena Chemical Company also d/b/a HyPerformer Seed Company	HB90-741	HSC 741

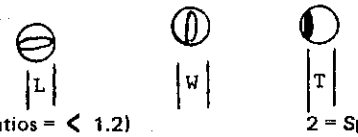
ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*
6075 Poplar
Suite 500
Memphis, TN 38119

FOR OFFICIAL USE ONLY
PVPO NUMBER
9300228

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]).

1. SEED SHAPE:

[2]



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

2. SEED COAT COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other *(Specify)* _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[2] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

4. SEED SIZE: (Mature Seed)

[1][4] Grams per 100 seeds

5. HILUM COLOR: (Mature Seed)

[6] 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other *(Specify)* _____

6. COTYLEDON COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green

7. SEED PROTEIN PEROXIDASE ACTIVITY:

[ ] 1 = Low 2 = High

8. SEED PROTEIN ELECTROPHORETIC BAND:

[ ] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

9. HYPOCOTYL COLOR:

[3] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

10. LEAFLET SHAPE:

[3] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other *(Specify)* _____

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11. LEAFLET SIZE:

[2] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17')
3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[2] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton')
3 = Dark Green ('Gnome'; 'Tracy')

13. FLOWER COLOR:

[2] 1 = White 2 = Purple 3 = White with purple throat

14. POD COLOR:

[1] 1 = Tan 2 = Brown 3 = Black

15. PLANT PUBESCENCE COLOR:

[2] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[2] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton')
3 = Bushy ('Gnome'; 'Govan')

17. PLANT HABIT:

[1] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will')
3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

18. MATURITY GROUP:

[1][0] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V
9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

[2] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

[0] Bacterial Blight *(Pseudomonas glycinea)*

[0] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

[0] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

[0] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [ ] Other *(Specify)* _____

[0] Target Spot *(Corynespora cassiicola)*

[0] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[0] Powdery Mildew *(Microsphaera diffusa)*

[0] Brown Stem Rot *(Cephalosporium gregatum)*

[ ] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)*

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19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

[0] Pod and Stem Blight *(Diaporthe phaseolorum* var; *sojae)*

[0] Purple Seed Stain *(Cercospora kikuchii)*

[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma* var. *sojae)*

[1] Race 1 [1] Race 2 [0] Race 3 [0] Race 4 [0] Race 5 [0] Race 6 [0] Race 7

[0] Race 8 [0] Race 9 [ ] Other *(Specify)* Field tolerant to field populations of unknown races

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

[0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

[0] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

[ ] Race 1 [ ] Race 2 [2] Race 3 [2] Race 4 [ ] Other *(Specify)* _____

[0] Lance Nematode *(Hoplolaimus Colombus)*

[2] Southern Root Knot Nematode *(Meloidogyne incognita)*

[0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[2] Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[ ] OTHER DISEASE NOT ON FORM *(Specify):* _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Iron Chlorosis on Calcareous Soil

[ ] Other *(Specify)* _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[2] Potato Leaf Hopper *(Empoasca fabae)*

[ ] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Braxton	Seed Coat Luster	Bedford
Leaf Shape	Braxton	Seed Size	Centennial
Leaf Color	Braxton	Seed Shape	DP 566
Leaf Size	Braxton	Seedling Pigmentation	DP 566

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
Submitted	157	2.2	86					14	
Name of Similar Variety 2-Braxton	157	1.9	86					16	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

EXHIBIT D

HELENA CHEMICAL COMPANY, INC'S APPLICATION FOR HSC 741

ADDITIONAL DESCRIPTION OF VARIETY

HSC 741 is an F4 selection composited in the F5 generation from the cross of Bedford* an unknown line. It is late group VII averaging similar in height and maturity to Braxton. HSC 741 has purple flowers, tawny pubescence and tan pods. Seeds are shiny yellow with black hila. It has resistance to soybean cyst nematode races 3 and 14 as well as root know species Meloidogyzne incognita and Meloidogyzne arenaria.

EXHIBIT E

HELENA CHEMICAL COMPANY, INC'S APPLICATION FOR HSC 741

STATEMENT OF APPLICANTS OWNERSHIP

Helena Chemical Company, Inc. is the owner of HSC 741 through purchase of the variety.

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United States Department of Agriculture
Agricultural Marketing Service
Science Division
Plant Variety Protection Office
NAL Building, Room 500
10301 Baltimore Blvd.
Beltsville, MD 20705-2351

October 25, 1995

Dr. Al Hoggard
Helena Chemical Co.
6075 Poplar, Suite 500
Memphis, TN 38119

Dear Dr. Hoggard:

SUBJECT: PVP Application No. 9300228, SOYBEAN, 'HSC 741': Exhibit E, Statement of the Basis of the Applicant's Ownership

Before final recommendation for issuance can be made for 'HSC 741', certain information needs to be supplied regarding the basis for ownership. The rights of an applicant to a variety, for plant variety protection purposes, are derived from the original breeder[1]. Since 'HSC 741' is owned by Helena Chemical Company, Inc. through purchase of the variety, it is necessary to determine the rights that original breeder would have had under the Plant Variety Protection Act had he or she desired to apply for plant variety protection.

Please supply responses to the following questions:

a. **If the original rights to the variety were owned by individual(s):**
Is (are) the original breeder(s) a U.S. National? Yes____ No____

If no, give country _____

b. **If original rights to the variety were owned by a company:**
Is the original breeder a U.S. Based company? Yes__✓__ No____

If no, give country _____

NOTE: You are not required to reveal the identity of the original breeder or the company/individual from which the variety was purchased.

The requested information must be received in the Plant Variety Protection Office on or before **November 27, 1995**, or the application will be deemed abandoned. A request for an extension of time to supply the information may be made on or before the deadline specified above. Such a request must specify the time requested, provide an explanation of why additional time is necessary, and be accompanied by the fee ($50) for granting an extension to respond to a request for information. See sections 97.20 through 97.23 and 97.104 (formerly 180.20

[1] Original breeder may be individual company who directed final breeding.